

# Notice of Allowability

Application No.

10/531,126

Examiner

Tung X. Le

Applicant(s)

PIROZHENKO ET AL.

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 1/16/2007.
2. ☒ The allowed claim(s) is/are 1-43.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
TRINH DINH  
PRIMARY EXAMINER

**DETAILED ACTION**

1. Applicant's communication submitted on January 16, 2007 is acknowledged.

***Allowable Subject Matter***

2. Claims 1-43 are allowed.
3. The following is an examiner's statement of reasons for allowance:

Prior art of record fails to disclose or fairly suggest the following limitations:

- A particle accelerator system, comprising an accelerating section directly coupled to the bunching section, the accelerating section being operable to receive bunched charged particles from the bunching section and to accelerate the bunched charged particles, the accelerating section defining a port for receiving radio-frequency power, wherein the port comprises a sole and only port of both of the accelerating section and the bunching section for receiving radio-frequency power, in combination with the remaining claimed limitations as claimed in independent claim 1 (claims 2-11 are allowed for depending on claim 1).
- A particle accelerator system, comprising an injector, a bunching section, an accelerating section operable to receive bunched charged particles from the bunching section and to accelerate the bunched charged particles, and a resonant coupling cavity interposed between the bunching section and the accelerating section, in combination with the remaining claimed limitations as claimed in independent claim 12 (claims 13-31 are allowed for depending on claim 12).

Art Unit: 2821

- A particle accelerator system, comprising an injector; a bunching section, wherein each the bunching cavity has a dimension extending in the direction and the dimension of each the bunching cavity of the plurality of bunching cavities increases in magnitude for each the bunching cavity positioned successively in the direction, and wherein the bunching cavities are operable to receive charged particles from the injector and to bunch the received charged particles; and an accelerating section directly coupled to the bunching section, the accelerating section being operable to receive bunched charged particles from the bunching section and to accelerate the bunched charged particles, in combination with the remaining claimed limitations as claimed in independent claim 32 (claims 33-43 are allowed for depending on claim 32).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fujisawa (U.S. 5,825,140) discloses a radio frequency type charged particle accelerator.

Franzen (U.S. 5,572,035) discloses a method and device for the reflection of charged particles on surfaces.

Art Unit: 2821

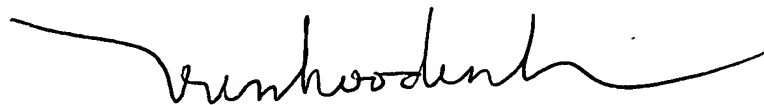
Etievant et al. (U.S. 5,376,893) discloses a resonant cavity electron accelerator.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung X. Le whose telephone number is 571-272-6010. The examiner can normally be reached on 8:30 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens can be reached on 571-272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner  
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AU 2821



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March 4, 2007